**Galileo's View of Io**. D. L. Matson, D. L. Blaney, T.V. Johnson, and G.J. Veeder, NASA JPL/Caltech, 4800 Oak Grove Blvd., Pasadena, CA, 91109. blaney@kookaburra.jpl.nasa.gov.

Past and ongoing studies of Io provide the basis for a set of predictions which we published last year (Matson *et al.* LPSC XXVII, p833-834, 1996). In the present paper we revisit these predictions in the light of new data from Galileo and ground-based astronomical telescopes.

The following predictions have been confirmed and will be discussed in detail:

1). Loki remains the dominant complex of thermal anomalies, and has undergone changes in appearance.

2). Temperature distribution of material is consistent with previous ground based models and Voyager.

3). Some areas viewed by Voyager are still volcanically active, but others have decreased their activity. New regions not determined to be active by Voyager are also present.

4). High temperatures (>1000 K) were observed in the 1-5 μm region that cooled rapidly. Confirming the prescence of magmas other than sulfur.

5). Larger cooler areas are associated with the high temperature observations.

6). The size temperature distributions of thermal areas is consistent with cooling silicate lavas.

7). Away from the thermal anomalies, the nighttime temperatures are higher than predicted by homogeneous thermal physical models.

8). $SO_2$ gas is concentrated locally in plumes and other vents.

The following predictions have yet to be confirmed.

A.) Do stealth plumes exist?

B). Does Io's heat flow need to be revised up (due to more hot spots at higher latitudes) or down (due to PPR nighttime data being about 10 K cooler than predicted)?

C). Do thermal anomalies brighten over time as they cool?

D). Are cooling silicate magmas the dominant source of heat flow?

E). Is there an $SO_2$ solid state green house present?

We will use the new insights into Io's provided to Galileo to address the above questions and evaluate the evidence to date for and against these predictions.

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